

# CR2032

**TECHNICAL SPECIFICATION  
FOR  
MERCURY FREE LITHIUM  
MANGANESE DIOXIDE BUTTON CELL  
GREEN LITHIUM BUTTON CELL**



The Manufacturer reserves the right to modify product specification and data stated herein without prior notice.



# Product Specifications

# Model No. : GIGALITE-CR2032

## 1. SCOPE

This specification applies to the following 3.0v lithium button cell CR2032.

## 2. CHEMICAL SYSTEM : Li-Manganese Dioxide (Lithium perchlorate Electrolyte )

"GREEN LITHIUM BUTTON CELL - The Mercury test result<0ppm(0%)"

"GREEN LITHIUM BUTTON CELL - The Cadmium test result<0ppm(0%)"

"GREEN LITHIUM BUTTON CELL - The Lead test result<0ppm(0%)"

## 3. RATINGS

TABLE I :

| ITEM                                |                         | UNIT     | SPECIFICATIONS | CONDITIONS  |
|-------------------------------------|-------------------------|----------|----------------|---|
| Nominal voltage                     |                         | V        | 3.0            | Standard discharge  |
| Nominal capacity                    |                         | mAh      | 210            | Standard discharge  |
| Instantaneous short-circuit current |                         | mA       | ≥ 250          | Time≤ 0.5 second  |
| Off-load voltage                    |                         | V        | ≥ 3.25         |   |
| Storage temperature                 |                         | °C       | -10~40         |   |
| Standard weight                     |                         | g        | 3.0            | Unit cell   |
| Service output                      | Initial                 | Standard | 900 h          | Continuous discharge with load 15kΩ , till 2.0v end-voltage |
|                                     |                         | Minimum  | 800 h          |   |
|                                     | After 12 months storage | Standard | 800 h          |   |
|                                     |                         | Minimum  | 750 h          |   |

TABLE II :

| ITEM                | CONDITIONS  | CHARACTERISTICS |       |
|---------------------|---|-----------------|-------|
| Thermal durability  | Kept for 20 days at 60°C±3°C, then continuously discharge with 15kΩ load till 2.0v end-voltage                | Standard        | 800 h |
|                     |   | Minimum         | 700 h |
| Self-discharge rate | Stored for 12 months at normal temperature, then continuously discharged with 15kΩ load till 2.0v end-voltage | ≤ 5%            |       |

## 4. PERFORMANCE AND TEST METHODS

Unless otherwise stated, all the testing is carried out under the condition: environmental temperature, 20°C~25°C; environmental humidity, 65±20%. Please refer to Table III

## 5. SUGGESTIONS AND CAUTIONS

5.1 Install batteries correctly.

5.2 Ensure the contact points to be clean and conductive.

5.3 Do not mix different types, different brands batteries to serve together.

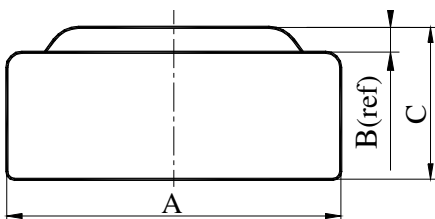
- 5.4 Do not heat, recharge the batteries.
- 5.5 Do not dispose of the batteries in fire.
- 5.6 Keep away from the small children, if swallowed promptly see doctor.
- 5.7 Pay attention to the producing date.

TABLE III :

| No | ITEM                                | TEST METHODS   | STANDARD  |                |
|----|-------------------------------------|--|---|----------------|
|    |                                     |  | Parameter                                       | Value          |
| 1  | Dimensions                          | Using vernier caliper (accuracy $\geq 0.02$ ) while avoiding short-circuit   | Diameter  | 20.0 (-0.2) mm |
|    |                                     |  | Height  | 3.20 (-0.2) mm |
| 2  | Off-load voltage                    | Using multimeter (accuracy $\geq 0.25\%$ ) internal resistance $\geq 1M\Omega$   | $\geq 3.25$ v                                   |                |
| 3  | Instantaneous short-circuit current | Time of short-circuit should be less than 0.5 second and avoid repeated test within half an hour   | $\geq 250$ mA                                   |                |
| 4  | Appearance                          | Eyeballing   | Bright, clean, no rust, no leakage, And no flaw |                |
| 5  | Capacity                            | Continuously discharge for 8 hours with load 15k, temperature at 20~25°C, humidity at 65 $\pm$ 20% till 2.0v end-voltage (for fresh battery only: within 3 months )            | $\geq 900$ h                                    |                |
| 6  | Vibration test                      | Put battery on the platform of the vibrations machine, start the machine and adjust the frequency from 10 times per minute to 15 times per minute. keep it running for an hour | Characteristics keep stability                  |                |
| 7  | Leakage at high temperature         | Stored under temperature (45°C) for 30 days  | Leakage rate $\leq 1\%$                         |                |
| 8  | Over discharge Test                 | After 2.0v end-voltage, continuously discharged for 5 hours  | No leakage allowed                              |                |

6. Warranty : 36 months shelf life after delivery.

## 7. NOMINAL DIMENSIONS



| Dimensions | Unit: mm       |
|------------|----------------|
| A          | 19.80----20.00 |
| B          | 0.2(ref)       |
| C          | 3.00----3.20   |